Navpixel™ NPS1535

USER MANUAL

15” IP-65 Marine Display Panel PC

Sunlight Readable LED B/L LCD

(1st Edition 2/18/2009)

All information is subject to change without notice.

Approved by	Checked by	Prepared by
Ming	Hank	Jacky

RECORD OF REVISION

Version and Date	Page	Old Description	New Description	Remark

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USAGE NOTICE

01. To reduce the risk of electric shock, do not remove the cover or back. There are no user-serviceable parts inside.
02. Make sure you turn off and unplug the the display before installing devices.

Precautions

To maximize the life and safe use of your unit, always be sure to follow the warnings, precautions and maintenance recommendations in this user's guide.

In a Watercraft or Vehicle:

- The panel PC should be visible to the driver only if it is used for navigation, or system control. Care should be taken to ensure distraction does not occur.
- Review all applicable federal, state and local laws and regulations to make sure the panel PC is used properly and safely.
- Avoid using the panel PC for extended times while the charging system is not running, or the panel PC could drain the watercraft's battery.

Cleaning the Panel PC:

- Use a soft cloth moistened with mild detergent, isopropyl alcohol, or window cleaners to clean the display housing.
- Never use abrasive cleaners, waxes or solvents to clean the unit.

1.0 INTRODUCTION

1.1 About Navpixel™ Marine Display Panel PC

Navpixel™ NPS1535, the high-performance, rugged touch panel PC Panel PC, is specially engineered to survive the most demanding applications. You will soon become familiar with the quality difference in this bright sunlight readable (0.5 to 1,000 nits) panel PC.

The Navpixel™NPS1535 sunlight readable panel PC handles a wide-range of extreme environments making it the industry choice for mobile applications. Housed in a milled billet aluminum case, the slim-profile Navpixel™NPS1535 is light weight and watertight. Front-mounted controls and the touch screen make the industrial rugged panel PC user-friendly. We have incorporated the latest optical engineering to achieve optimal viewability in all lighting conditions, including direct sunlight. The Navpixel™NPS1535's power efficient, low heat design results in increased reliability and longevity required for mission critical deployment.

1.2 FEATURES

- 1000 Nits Sunlight Readable
- 15" Long Life, Low Power Consumption LED backlight
- Intel™ Celeron® M / Core 2 Duo Based Design
- -10ºC ~ 40ºC Wide Temperature
- Advanced Optical Bonding (AOT) Powered by OptiBond™ Technology
- High Shock & Vibration Resistance
- IP-65 Front Waterproof
- Touch Screen (Optional)

1.3 APPLICATION:

- Marine

1.4 DISPLAY GENERAL SPECIFICATI0NS:

Item	Specification	Unit	Note
Active Area	304.128 (H) x 228.096(V) (15.0"LED Backlight)	mm	(1)
Bezel Opening Area	307.4(H) x 231.3(V)	mm	
Driver Element	a-Si TFT active matrix	-	-
Pixel Number	1024 x R.G.B x 768	pixel	-
Pixel Pitch	0.297(H) x 0.297(W)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	16.2M color	color	-
Display Mode	Normally white	-	-
Surface Treatment	Hard Coating (3H), Anti-Glare (Haze 25)	-	-

1.5 System GENERAL SPECIFICATI0NS:

System

Processor	Supports Intel® Core 2 Duo (Merom)/ Core Duo/ Core Solo/ Celeron M (Yonah) Processors
System Memory	240-pin DIMM x 2, DDRII 400/533/667 up to 4GB
Chipset	Intel® 945GM + ICH7M (-DH optional for RAID)
Ethernet	Intel 82573L 10/100/1000Base-TX, RJ-45 x 2
BIOS	Award Plug & Play BIOS – 1MB ROM
Expansion Interface	PCI x 1, PCI-E〔x1〕, Mini PCI x 1
Power Requirement Power Consumption (Typical)	ATX (+3.3V, +5V, +5VSB, +12V) or AT (+5V, +12V) T7400 2.16GHz, DDRII 667 2 GB--+12V @ 2.24A, +5V @ 3.6A
Operating Temperature Storage Temperature Operating Humidity MTBF	-10°C ~ 40°C -20°C ~ 60°C 0%~90% relative humidity, non-condensing 60,000

Display: Supports CRT/LCD, CRT/TV, LCD/TV, LCD/DVI and CRT/DVI simultaneous/ dual view display

Chipset Memory LCD Interface	Intel® 945GM Shared system memory up to 224MB w/ DVMT3.0 18-bit dual-channel LVDS TFT LCD, 2nd 24-bit dual-channel LVDS through an optional SDVO card
DVI	Yes, 2nd DVI through an optional SDVO card

I/O

Storage Serial Port	SATA II x 2, Type II CompactFlash x 1 RS-232 x1, RS-232/422/485 x 1
Audio	MIC-In, Line-In, Line-out, CD-in, Stereo amplifier included
USB	USB 2.0 x 4
K/B and Mouse	PS/2 Keyboard x 1, and PS/2 Mouse x1
Power Input	AC110 ~ 240V 9~36VDC (Optional)

2.0 SAFETY

GENERAL SAFETY INSTRUCTIONS

- Before operating the Navpixel™ NPS1535 Panel PC Panel PC, read this user manual thoroughly
- Keep this user manual for future use
- Verify the computer system capability (see Packaging Contents & Installation) to insure operation of the Panel PC
- For expeditious installation, follow these user manual instructions in sequence
- Adhere to all Caution and Warnings on system and as stated in this user manual

Shock Hazards

This icon is intended to tell the User of a potential risk of electrical shock.

Instructional

This icon is intended to tell the User of important operating and/or maintenance instructions.

- User manual instructions for installation and operation should be followed precisely
- Adjust only those controls covered by the user manual's operating instructions; improper adjustment of other controls voids the unit's warranty and may result in unit damage, and
- Adhere to local installation codes.

GENERAL UNIT SAFETY

- Always disconnect the unit from the power source before cleaning
- Do not operate the unit with a damaged cord
- Do not operate if the unit has been dropped or damaged. The unit should be inspected by our qualified Service Personnel
- Position the power cord so it is not in contact with hot surfaces
- Do not allow anything to rest on the power cord, and
- Do not place the power cord in the path of foot traffic.

General Safety Precautions

- Power cord must be connected to a properly wired and grounded power source
- Any equipment to which the unit is attached must also be connected to properly wired and grounded power sources
- Do not connect or disconnect the unit during an electrical storm
- Do not remove the unit covers ? there are no user serviceable parts in the unit
- Do not disassemble or modify the unit to avoid the possibility of electrical shock, damage to electrical components or scratching the display surface, and disassembly of the unit voids the warranty.

Connecting Cables

• Disconnect the power to the computer when the Panel PC is being installed, and
• Upon installation, verify the power connector is securely seated on the unit.

Power Source

This unit may be operated from an AC (optional) or DC (standard) power source.
• Use the supplied power cable, and
• Always connect to a properly grounded power source.

EMI / RFI

This product has been engineered to meet or exceed international industry standards addressing product design and enclosure protection against EMI/RFI when installed with the factory provided cables

PROTECTION ON SERVCING

Servicing - User

• User product servicing is limited to cleaning the unit
• Do not disassemble or modify the unit to avoid the possibility of electrical shock, damage to its electrical components or scratching the display surface, and
• Disassembly voids the warranty.

Servicing - Navpixel™

Qualified Service Personnel may be required if the unit:
• Does not operate normally when installation instructions are followed
• Does not operate normally when operating instructions are followed
• Has been dropped or damaged, or
• Exhibits a distinct change in performance, indicating a need for service.

SHIPPING

If the unit should need to be shipped to the Service Center or local dealer, the original packing material should be used to insure safety of the unit in shipping. Repack the unit as it would have originally been received from us.

3.0 PRODUCT CARE AND MAINTENANCE

PRODUCT CARE

This Navpixel™ NPS1535 Marine Display has been designed to provide optimum performance and service without any required scheduled maintenance other than occasional cleaning.

Disconnect the Monitor from the power source before cleaning the Monitor, Touch Screen or unit's enclosure.

Do not use abrasive cleaners or solvent-based (flammable) cleaners on the Flat Panel or Touch Screen Display, its enclosure or any other electrical device (cables, power cord, etc)

- Do not use paper products as they may scratch the display screen, and
- Do not directly apply cleaning solutions to the display screen.

DISPLAY SCREEN CLEANING

- A vinegar-based cleaner is preferred to prevent streaking and degradation of the coatings, or
- A non-abrasive glass cleaner such as a professional foam glass cleaner
- Apply the cleaning solution to a soft clean cloth, dampening slightly
- Keep a fresh side of the cleaning cloth towards the screen surface to avoid scratching it with accumulated grit, and
- To minimize the risk of abrasion to the screen, air drying is recommended.

TOUCH SCREEN

Touch Screen Cleaning

- Use a special screen cleaning tissue or a solution specifically antistatic coatings. Follow the manufacturer's instructions,
- Lightly dampen a soft clean cloth with water or a general detergent solution
- Keep a fresh side of the cleaning cloth towards the screen scratching it with accumulated grit, and
- To minimize the risk of abrasion to the screen, air drying

Panel PC Enclosure

- Clean the unit enclosure with a soft clean cloth lightly dampened purpose mild detergent solution
- To rinse, wipe down with clean water, and
- Dry with a soft clean cloth.

Long-term Storage

- For long-term storage, it is suggested the unit be stored in a normal indoor environment
  and the display glass be protected from accidental damage
- For pedestal mount units, disconnect the cable(s) and loosen the arm adjustment to a point where the ball can be removed from the arm, or

• For Flush or Panel Mount units, cover the product with a protective covering that will not scratch or transfer any dyes to the display screen.

MAINTENANCE

Power Cord

To avoid shock and fire hazards, replaced the unit's power cord if:

- Insulation becomes damaged, or
- A loose connection is suspected.

Other Maintenance

Only Qualified Service Personnel should perform all other maintenance except for cleaning and the power cord replacement described above.

4.0 PACKAGING CONTENTS

The Navpixel™NPS1535 is shipped in a box with PE foam packaging. It is recommended the installer save the box and all packaging materials in case the unit would need to be returned to the Service Center or local dealer. (Figure 1)

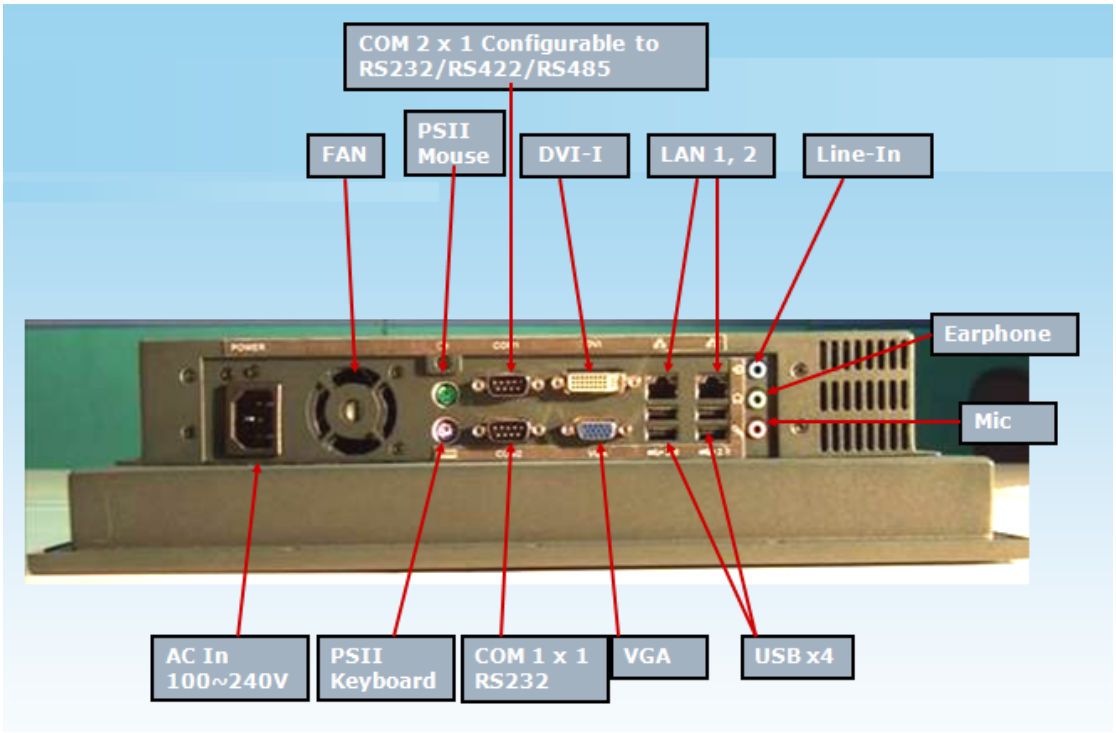
- One Navpixel™ NPS1535 unit
- User CD with touch screen driver
- Four (4) mounting bracket lugs and four (4) stainless steel threaded studs

(Figure 1)

5.0 CONNECTORS

5.1 CONNECTORS

Connectors are located on the bottom of the unit housing, from left to right (Figure 2): Connectors are physically unique to insure the installer makes the proper connections.



(Figure 2)

6.0 INSTALLATIONS

The Navpixel™ NPS1535 is designed to be mounted in two configurations:

6.1 VESA75 / VESA100 MOUNT

The Navpixel™ NPS1535 is designed compatible with VESA75 and VESA100 mount. By installing the panel PC with this kit, the user can adjust the viewing angle to improve viewability in changing environments. This mounting system has proven to be successful in supporting an extreme amount of weight in high vibration and difficult-mount applications.

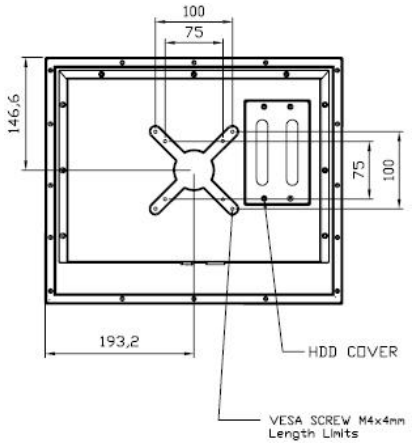
6.2 PANEL (Flush) MOUNT

For installation, there are four tapped mounting holes on the both sides of the unit. The mounting packet is included with the product accessories in the shipping box. This packet includes four (4) stainless steel threaded studs, 3.2 cm and four (4) mounting bracket lugs.

Mounting the Panel PC

The back of the panel PC includes mounting points that you can use to mount the panel PC as your installation requires.

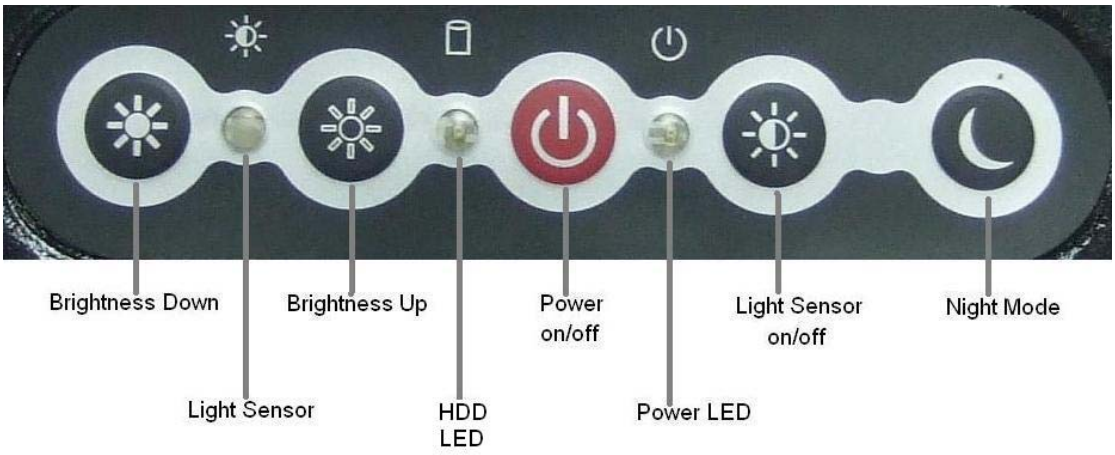
Mounting holes on the Navpixel™ NPS1535 allow the panel PC to be mounted by rear mounted using VESA75 or VESA100 mount



Mounting from rear:

- VESA75 (4 hole pattern). Accepts M4x0.7 up to 4mm depth.
- VESA100 (4 hole pattern) Accepts M4x0.7 up to 4mm depth.

7.0 OSD Operation Buttons



Your Sunlight Readable panel PC can be controlled using the manual buttons on the front bezel of the unit.
The manual enables you to change the way in which your display is set up brightness using the manual buttons.

Power on/off button

Power on: To press the POWER button for start PC system.
Power off: To press the POWER button for shut down PC system.

Power LED button
LED on is for the start PC system mode.
LED off is for the shutdown PC system mode.

Light Sensor on/off button
Light Sensor on: To press the button for enable light sensor function.
*** If enable light sensor function can not to use that manual brightness up/down function.
Light Sensor off: To press the button for disable light sensor function.
*** If disable light sensor function can to use that manual brightness up/down function.

Night Mode button
Press the button to activate night mode and dim the display.
Press again button to return to normal mode.

HDD LED button
The HDD LED is for the PC system access status light.

Light Sensor
The light sensor is used to detect the ambient light and then adjust the brightness automatically.

Brightness Up
Dimming up the display brightness.

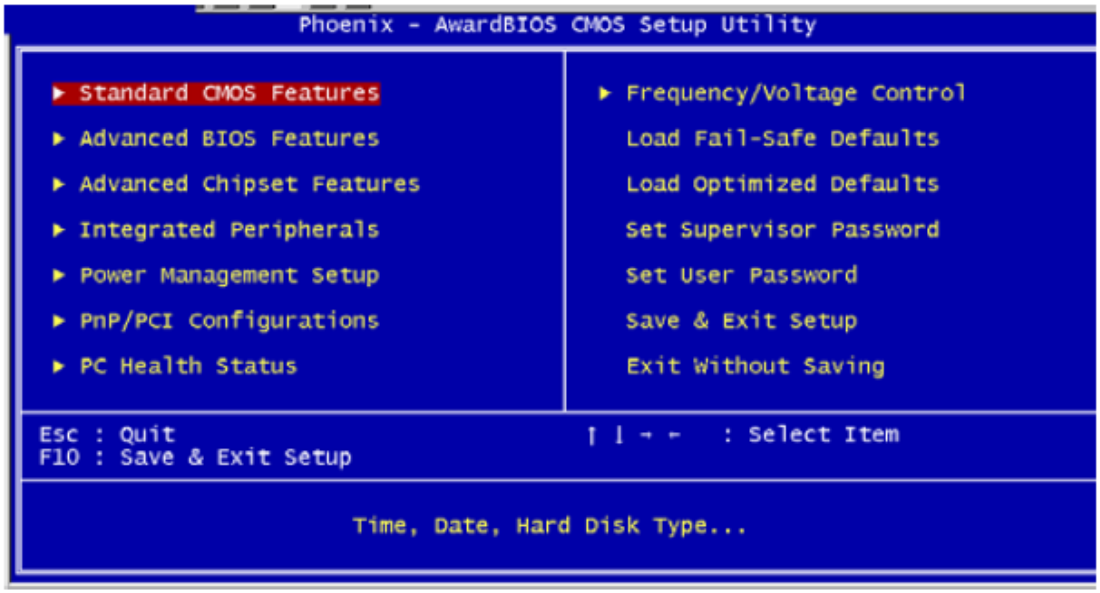
Brightness Down
Dimming down the display brightness.

8.0 Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del> immediately. This will allow you to enter Setup.



Standard CMOS Features
Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features
Use this menu to set the advanced features available on your system.

Advanced Chipset Features
Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals
Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup
Use this menu to specify your settings for power management. (HDD power down, power on by ring, KB wake up, etc.)

PnP/PCI Configurations
This entry appears if your system supports PnP/PCI.

PC Health Status
This menu allows you to set the shutdown temperature for your system.

Frequency/Voltage Control
Use this menu to specify your settings for auto detect DIMM/PCI clock and spread spectrum.

Load Fail-Safe Defaults
Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults
Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password
Use this menu to set Supervisor/User Passwords.

Save and Exit Setup
Save CMOS value changes to CMOS and exit setup.

Exit Without Saving
Abandon all CMOS value changes and exit setup.

9.0 Driver Installation

Insert the driver CD, please follow the sequence below to install the drivers.

Follow the sequence below to install the drivers:
Step 1 – Install INF Driver
Step 2 – Install VGA Driver
Step 3 – Install LAN Driver
Step 4 – Install Audio Driver
Step 5 – Install SATA Driver

USB 2.0 Drivers are available for download using Windows® Update for both Windows® XP and Windows® 2000. For additional information regarding USB 2.0 support in Windows® XP and Windows® 2000, please visit www.microsoft.com/hwdev/usb/.

Please read instructions below for further detailed installations.

Installation:

Insert the CD into the CD-ROM drive. And install the drivers from Step 1 to Step 4 in order.
Step 1 – Install INF Driver

1. Click on the *Step 1-inf* folder and then double click on the *setup.exe*
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2 – Install VGA Driver

1. Click on the *Step 2-vga* folder and choose the folder your system is
2. Double click on *.exe* file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 – Install LAN Driver

1. Click on the *Step 3-LAN driver* folder
2. Select the *Windows* folder and then double click on *Autorun.exe*
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 4 – Install Audio Driver

1. Click on the *Step 4- AC97* folder and choose the folder your system is
2. Double click on *.exe* file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Note:
Under the Window OS environment, if the CRT connector is connected to display panel PC by the data switch device, the user need to set the color and resolution from Intel Graphic utility (VGA driver) instead of setting from the control panel in case of the wrong display appearance.

Step 5 – Install SATA Driver

1. Click on the Step 5- ICH7M-GHM SATA Driver Folder
2. Select the Win OS folder and then double click on iatabl_cd.exe
3. Follow the instructions that the windows shows
4. The system will help you install the driver automatically

10.0 APPENDIX

Outline Dimensions

Unit: mm